Bridges to Stem Cell Research and Therapy at Pasadena City College

Grant Award Details

Bridges to Stem Cell Research and Therapy at Pasadena City College

Grant Type: Bridges II

Grant Number: EDUC2-08398

Investigator:

Name:	Pamela Eversole-Cire
Institution:	Pasadena City College
Type:	PI

Award Value: $2,798,815

Status: Active

Grant Application Details

Application Title: Bridges to Stem Cell Research and Therapy at Pasadena City College

Public Abstract:

The proposed CIRM Bridges to Stem Cell Research and Therapy Award will support further development of an existing stem cell biology training program that includes a wide range of internship opportunities, a rigorous curriculum, substantive auxiliary training opportunities, and stem cell techniques coursework at a CIRM-funded Shared Research Laboratory. Based upon the applicant institution's demographics (77% minorities, 49% low-income, and 44% first-generation) and their experience in biotechnology training and a current internship program, it is anticipated that CIRM Bridges interns recruited for the project will represent the diversity of California's population. The grant project will build on existing partnerships between the home institution and three outstanding host institutions that have collaborated on earlier projects to enhance stem cell research. Potential interns will be recruited through strong community outreach, including dissemination of General Education modules for stem cell education, inviting students from other colleges to seminars and activities, advertising to campus and community, and support from established biotechnology research and training centers.

The CIRM Bridges program will provide up to 50 one-year internships over five years. Interns will be required to complete Certificates of Achievement in Biological Technology (or equivalent) and Stem Cell Culture. Courses added to the curriculum include advanced stem cell techniques (collaboration with a host institution), fluorescent microscopy, and a journal club. A stem cell unit has been added to RNA Interference and majors Cell and Molecular Biology courses. General Education stem cell modules have been produced at collegiate and secondary levels. Auxiliary training includes seminars (intellectual property and confidentiality, Stem Cells and Regenerative Medicine, bioethics, stem cell career opportunities), specialized workshops (data management, bioinformatics, scientific writing and presentations, graduate school applications), scientific meetings and symposiums, and research presentations. Interns will also take part in patient and healthcare engagement activities and study the regulatory pathway and therapy development process.

The training will prepare CIRM Bridges interns to work at many levels in stem cell research labs (lab assistant, lab manager, professional staff, and research associates), or to continue in postgraduate programs. Trainees will be offered research opportunities with mentors in fields ranging from basic science of stem cells to translational research in regenerative medicine.

By combining established programs and partnerships, rigorous curriculum, mentoring at both the home and host institutions, performance evaluations of trainees and program, and experienced leadership and research opportunities at partner institutions, the program will produce highly qualified lab personnel for stem cell research in both academic and industry settings.

Statement of Benefit to California:	The proposed CIRM Bridges to Stem Cell Research and Therapy Award will fulfill CIRM's objectives to: create stem cell training programs that significantly enhance the technical skills, knowledge, and research experience of a diverse cohort of trainees in the development of stem cell-based therapies; foster a commitment among trainees to the goal of accelerating the delivery of stem cell-based therapies to patients; and broaden the participation in stem cell science of individuals representing the diversity of California's population. The diversity of prospective interns is ensured by both the applicant institution's demographics (77% are minorities, 49% are low-income, and 44% are first-generation) and their experience with disadvantaged and underrepresented student populations in their biotechnology and internship programs. The grant will support and enhance an existing stem cell biology training program that includes: • internship opportunities with mentors in fields ranging from basic science of stem cells to translational research in regenerative medicine • up to 50 one-year internships over life of the grant • rigorous curriculum and established Biotechnology Certificate Program • established partnerships between the home and host institutions • substantive auxiliary training opportunities • patient and healthcare engagement activities • coursework on the regulatory pathway and therapy development process • stem cell techniques coursework at a CIRM-funded Shared Research Laboratory • extensive mentoring and program evaluation strategies • experienced leadership at partner institutions These attributes will ensure that the program produces highly qualified lab personnel from diverse backgrounds for stem cell research in both academic and industry settings.

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